



THE
PORT OF QUEBEC.

ITS FACILITIES AND PROSPECTS.

THE PAST, PRESENT AND FUTURE OF QUEBEC'S
SHIPPING TRADE.

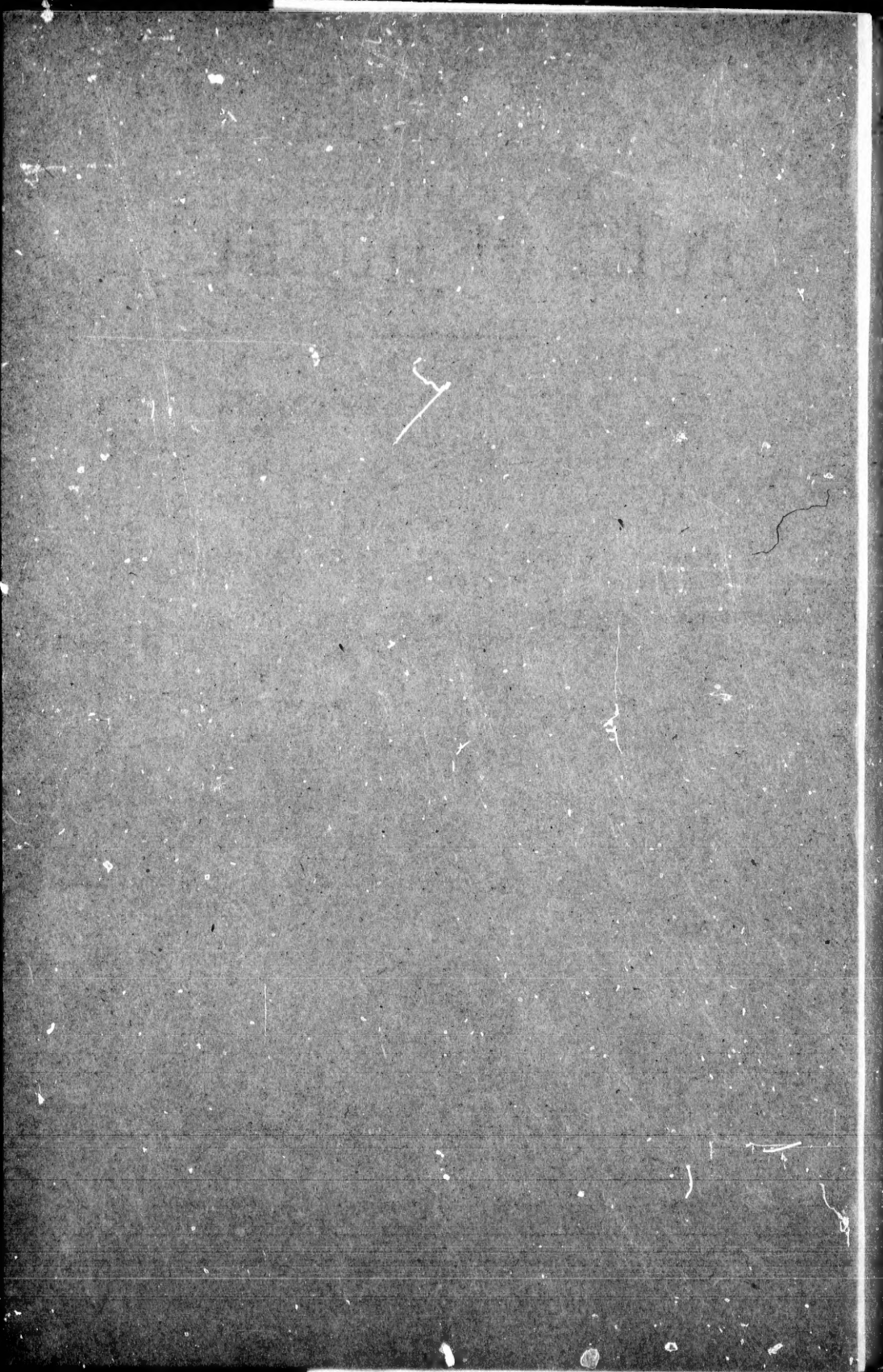
(Reprinted from the columns of the "Morning Chronicle.")

BY

E. T. D. CHAMBERS.

QUEBEC:
"MORNING CHRONICLE" STEAM PRINTING ESTABLISHMENT.
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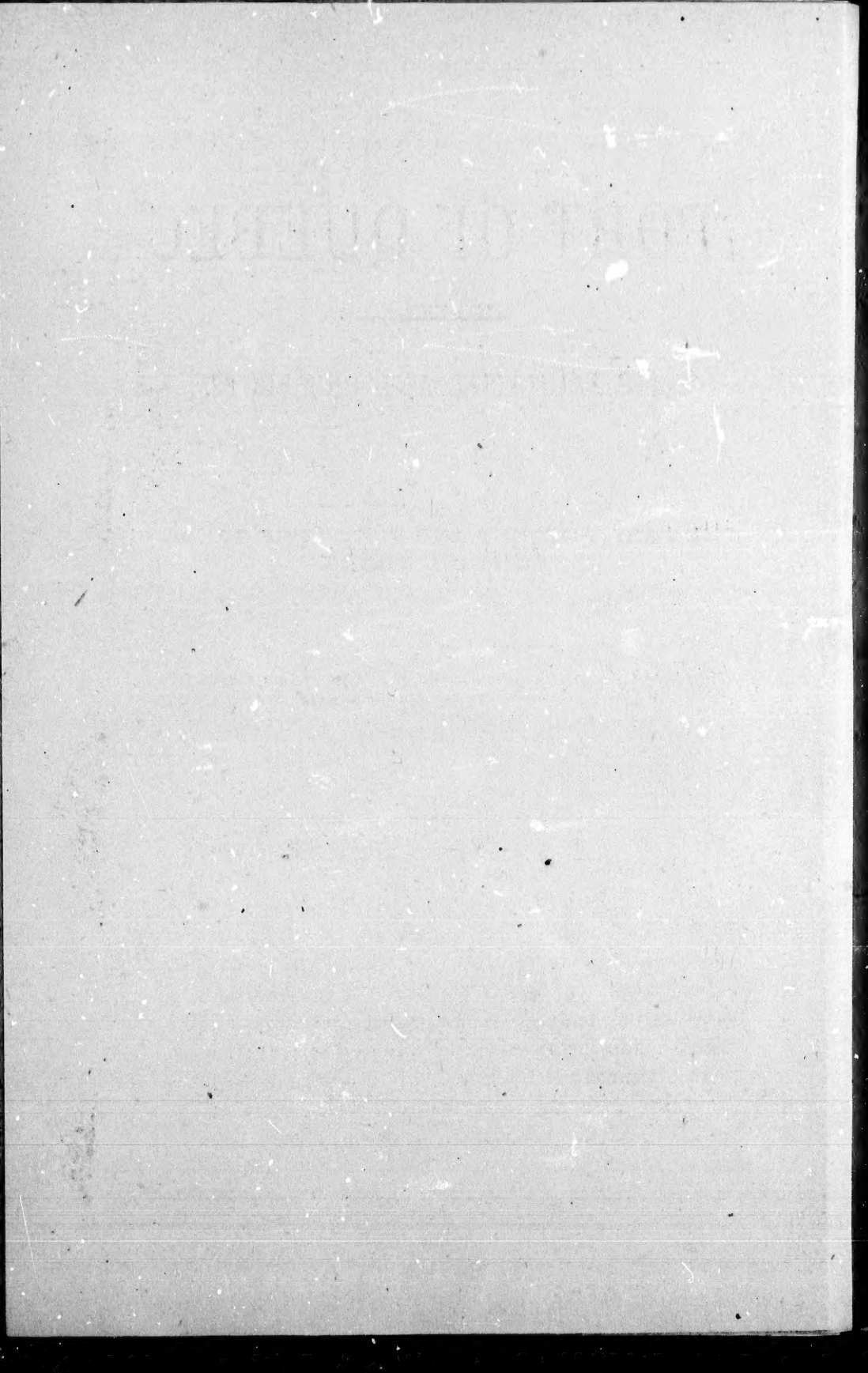
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THE PORT OF QUEBEC.

ITS FACILITIES AND PROSPECTS.

CHAPTER I.

THE PAST, PRESENT AND FUTURE OF QUEBEC'S SHIPPING TRADE.

Quebec, both as a city and as a port, is passing through what is probably the most crucial stage of its existence. For the past fifteen or twenty years the fates would seem to have combined to threaten its very being, and nothing, but its extreme vitality, and the courage and perseverance of its people has enabled it to struggle through the dark period of commercial depression and decaying trade to the glimmerings of light that betoken the approaching dawn of a brighter day.

The withdrawal of the seat of the Federal Government, the utter collapse of the shipbuilding industry, the recall of the Imperial troops, the gradual decay of

the lumber trade and the unnatural diversion of business from our port, by means to which we have been compelled to contribute, such as the deepening of the channel to Montreal, and the construction of the C. P. R. short line to rival ports, would have sufficed to ruin half a dozen cities of the size and importance of our own. But Quebec is peopled by men whose constant struggles against mighty odds have rendered enervation and effeminacy impossible to them and have conduced to vigor and bold endeavor;—capitalists who having invested in trade and local manufactures and lost, have invested again with success; and public men who having wrestled unsuccessfully with the powers that be to secure all that they believed their district to be entitled to, have wrestled again and again until they obtained for the port the expenditure that has provided it with the facilities for accommodating a large and lucrative commerce, and that must inevitably lead up to a bright and prosperous commercial future, so long as we retain amongst us

“Strong minds, great hearts, true faith and steady hands;
Men whom the lust of office will not kill;
Men whom the spoils of office cannot buy;
Men who have opinions and a will;
Men who have honor; men who will not lie.”

Quebec's natural position alone warrants her people in laying claims to a large share of the Canadian shipping business, while the establishment of our transcontinental line of railway ought in time to secure for this port the handling of a large proportion of the through commerce from the east, of that Greater Britain which Professor Seeley has so aptly described as “a World Venice, with the sea for streets.”

But, in addition to Quebec's natural position at the head of navigation in the St. Lawrence for vessels of the largest draught, her port can boast of exceptional facilities for the accommodation of shipping. Great as are the natural advantages of the harbor, engineering skill and the enterprise of our people have added enormously to this accommodation. Quebec boasts a harbor where the entire British navy may safely ride at anchor. It extends from the mouth of the Chaudière, on the west, to St. Patrick's Hole, on the east, a distance of over ten miles in length, the river being lined for the whole of that distance on either side, with wharves or booms, with the exception of where it washes the Beauport beach, while the new Princess Louise Docks, at the mouth of the St. Charles, are the admiration of all who see them. Great things are expected in the shape of increased commerce from the facilities afforded by these new harbor works, now that they are completed and thrown open to commerce. It is, therefore, of the utmost importance to the port of Quebec that these facilities should be made as widely known as possible.

The decline in the volume of Quebec's shipping trade during the last fifteen years, consequent, largely, upon the falling off in the export timber trade, may be illustrated as follows:—

In the season of 1875, 779 vessels, with a tonnage of 615,098 tons, were loaded and cleared from this port. In 1880, 634 vessels, of 555,451 tons; in 1885, 369 vessels, of 294,789 tons; and in 1889, 275 vessels, of 240,392 tons. The decrease in the number of sailing ships trading to the St. Lawrence is partly compensated for by the increase in the number of steamers. Thus

in 1889, according to a statement compiled by Mr. Frank Johnson, of the Quebec Exchange, forty steamships of 51,830 tons loaded timber cargoes in this port, against nineteen steamships in 1888, having a tonnage of 24,331 tons. If the increase continues every year in this proportion, for some years to come, Quebecers will soon have no cause to regret the decrease in the number of sailing ships.

Mr. J. M. LeMoine points out, in "Quebec, Past and Present," that "notable changes in the tonnage and model of Quebec crafts are observable since the first arrivals from sea, in September, 1535,—the 'Grande Hermine,' 100 to 120 tons, Jacques Cartier, commander, and her two smaller consorts, the 'Petite Hermine,' 60 tons, Marc Jalobert, master, and the 'Emerillon,' 40 tons, Guillaume Le Breton, master." Three centuries and a quarter later, the "Great Eastern," of 22,500 tons, found ample accommodation in our waters, though vessels of one-fourth its tonnage were unable at that time to ascend the river to Montreal, and the channel is still, after the hundreds of thousands of dollars that have been spent upon it, too shallow to admit of the passage of the flagship "Bellerophon," in safety to the latter mentioned port. The problem that the trade of Quebec has to solve is to secure the loading of the outgoing cargo of steamships and the discharge of the inward cargo in this port. In the vast majority of cases this would be incontestably to the interest of both owners and shippers. The disadvantages, additional cost, risk and danger involved in the ascent of the river to Montreal and the return to Quebec cannot be too much enlarged upon. The loss of time, the extra insurance,

the additional pilotage dues and the dangers of the channel are all so many potential reasons against the passing of Quebec by ocean steamships, to discharge or take on cargo at a more inland port. These disadvantages and the counter advantages offered by the port of Quebec, with its superior accommodation for shipping, must be made known far and wide. It is the manifest duty of all Quebecers to assist in this patriotic work, and to endeavor to bring about the removal of every disability that may weigh against the building up here of a commerce that shall make of their docks a veritable forest of masts, and of their port the Liverpool of Canada.

CHAPTER II.

THE SUPERIOR ADVANTAGES OF THE PORT OF QUEBEC.

The disadvantages of Montreal as a shipping port are too well known to require lengthy enumeration. A neighborly regard, too, for the sister city and port, and a desire to work wanton injury to none, forbids that we should follow the example set by a portion of Montreal's newspaper press in its efforts to prevent the surplus trade that the port is unable to accommodate from coming to Quebec. That there is no warrant for the dog-in-the-manger policy in regard to Quebec so persistently pursued by certain Montreal newspapers, is evidenced by the declarations of some of the magnates of the Canadian Pacific Railway, who claim that the rapid development of the great North-West, and of the carrying trade to which it will give rise, will be such in the very near future as to tax to the utmost the combined facilities for shipment of the two ports of Montreal and Quebec. It is certainly therefore the duty of Quebecers to take their fair proportion of this enormous trade, particularly when the efforts of Montreal are directed towards driving to foreign ports, the business that the sister city is unable to do herself. The imperfect character of the accommodation afforded by the port of Montreal will scarcely be remedied by groundless attacks upon the port of Quebec. Nor will these latter remove any of the other disadvantages under which Montreal labors as compared with Quebec. The

difference in our favor of being 180 miles nearer the sea cannot be affected by these unneighborly thrusts.

It would be well for Quebec and well for shippers and shipowners also, if these latter could appreciate at their true value the superior advantages of our port arising from its natural position alone. The saving of time to vessels loading and unloading in the port of Quebec is not the least of these advantages, but is supplemented by many more, amongst which may be mentioned the smaller insurance upon vessels and cargoes coming to Quebec as compared with that demanded upon those proceeding to Montreal, while amongst the disadvantages inseparable from the latter mentioned port are the additional cost of pilotage to Montreal, and above all the fearful dangers of the channel through Lake St. Peter that must be encountered by shipping destined for the port of Montreal. No official record of the disasters resulting from the navigation of the river between Montreal and Quebec, can be relied upon as correct. One would suppose that enough was known of these dangers to deter all vessels from facing them but such as must absolutely do so. Yet it is doubtful if one-half of the minor disasters that occur in this channel are ever reported. A well-known and experienced practitioner in the Vice-Admiralty Court in this city is our authority for the statement that over sixty vessels grounded between Quebec and Montreal during the shipping season of 1889 alone. Only such as were seriously injured were ever reported to the proper authorities, pilots thus avoiding trial for running ships aground, and captains evading the delay and cost that are implied by a survey of the ship's hull; while it would not be so flattering to the reputation for patrio-

tism of Montreal's shipping authorities, to suppose that they are anxious to swell the official list of casualties sustained by shipping on its way to their port. All the same, however, the number and extent of the greater catastrophes that could not be concealed, and that are known of all men, are urgent enough not only to engage the serious attention of shippers, owners and underwriters, the parties most directly interested in the disastrous results of an unnecessary exposure of valuable property to the dangers of the Lake St. Peter channel, but also to invite the attention of all patriotic Canadians interested in the removal of all impediments and dangers to the commerce of their common country. Were there no other port in existence with facilities for shipping equal to those of Montreal, or presenting fewer difficulties of approach, some other means of diminishing the still existing obstacles to the safe navigation of the channel between Quebec and Montreal would become a national necessity and duty. In Quebec, however, the Dominion has one of the finest seaports in the world, possessing facilities for commerce that Montreal can never attain to, and that is approachable by shipping without any of the dangers that encompass the passage of the river hence to Montreal. It is then the manifest duty of those who favor the extension of Canadian commerce and the development of the Canadian marine, to influence as largely as possible the avoidance by seagoing vessels of the risks that threaten the safety of shipping passing through the channel to the west of Quebec, and to encourage both steamers and sailing craft from foreign ports to take advantage of the superior facilities for commerce afforded by the port of Quebec.

CHAPTER III.

THE NEW HARBOR WORKS.

Reference has been already made to the "superior facilities" for commerce afforded by the port of Quebec, —facilities which, though familiar as household words to Quebecers who take an interest in shipping matters, cannot be too widely published to shippers in all parts of the Dominion and to the shipowners of every port in the world having commercial relations with Canada. Everybody, therefore, who is either directly or indirectly interested in the extension of Canadian commerce, and necessarily therefore in the prosperity of the port of Quebec, will rejoice at the action of the Quebec Harbor Commissioners in forwarding lithographed copies of Commander Maxwell's latest survey of the harbor to all the leading commercial centres and Boards of Trade of the two hemispheres. In this age of electricity, high pressure steam power and keen commercial competition, it is more than ever true that the gods help only those who help themselves. Without judicious advertising, neither communities nor individuals can hope to attain any large measure of success. The Harbor Commissioners are to be warmly congratulated upon their latest endeavors to make known the superior facilities of our port, and it is to be hoped that their efforts in this direction will not

rest here, but will be continued on the same lines, until everybody interested in any degree in Canadian commerce has been made aware of the advantages afforded to shipping in the harbor of Quebec. It is by such means alone that the infamous misrepresentations of unscrupulous foes can be met and properly refuted, and a proportionate return secured upon the immense expenditure made upon the new harbor works at the mouth of the St. Charles. With a view to seconding the efforts of the Commissioners in this direction, a description of Quebec's facilities for the accommodation of shipping is hereto subjoined.

EXTENT OF HARBOR AND WHARFAGE.

As mentioned in a former article, the whole British navy could safely ride at anchor in the port of Quebec, while for miles along her harbor, both sides of the St. Lawrence are lined with deep water wharves and piers. Most of these are in private hands, but there are some, outside of the new harbor works, that are controlled by the Harbor Commission. These are, briefly, the Pointe-à-Carcy wharf, which is reserved by the Commissioners for the accommodation of local trade, and has two stores, usually well filled with general merchandise, the Grand Trunk and Wellington wharves, both now leased to the Grand Trunk Railway for a general city terminus for freight, with the exception of the rear portion of the latter, leased to Mr. John Baile, with the coal shed recently erected thereon, and of two additional sheds, one now vacant and the other occupied by Messrs. John Ross & Co. The

East India wharf is leased to the Québec Steamship Company and Messrs. Geo. M. Webster & Co., with the exception of stores numbers four and five, which are occupied by Messrs. Verret, Stewart & Co. Atkinson's wharf is occupied by Messrs. John Baile, Pruneau and Drolet & Poitras, and Marmetto's by A. R. Pruneau. The only remaining wharf controlled by the Commission, outside of the new works, is Reynar's, the store upon which is leased to Messrs. G. M. Webster & Co.

THE NEW HARBOR WORKS.

Few more magnificent systems of docks are anywhere to be found than that which has recently been completed at the mouth of the St. Charles. The exterior of these works is formed by the Princess Louise Embankment and quay wall on the north side of the docks, which is 3,960 feet long and 330 wide. The space enclosed between it and the wharves which jut out from St. Andrew street is divided into two unequal parts by the cross wall, and is nearly sixty acres in extent. The outer or tidal basin is 20 acres in area and 25 feet deep at low water of ordinary spring tides, for a length of 1,250 feet. The river basin is 36 acres in area, and 25 feet deep at high water lowest neap tides, for a length of 2,160 feet. In connection with the depth of water in the tidal basin at low water of ordinary spring tides, it should be mentioned that in the port of Québec spring tides rise eighteen and neaps thirteen feet.

In reply to enquiries made by the Harbor Commissioners, both the Harbor Master and the Directors

of the Corporation of Pilots have declared that large steamers of the size of those intended to be subsidized by the Federal Government for carrying the Canadian trans-Atlantic mails, could, without any difficulty whatever, go in and out of the basin, through its present entrance, and once within, there is certainly accommodation for the largest steamships afloat to moor in perfectly quiet and landlocked water, and to discharge or take on cargo from the wharves which are traversed on either side of the docks by the trains of the Canadian Pacific Railway.

The Commissioners' regulations respecting the management of the Louise Docks have been carefully framed with a view to the convenience of shipping taking advantage of them. No vessel is, of course, permitted to anchor within or without the docks in such a place or position as to prevent a free and unobstructed passage into or out of either of the docks, nor may any vessel or timber be moored in such a manner as to obstruct the passage between the two basins.

The entrance gates into the West Dock are generally opened one hour before, and remain open until high water, when they are closed and remain so until the next succeeding tide.

The railway accommodation upon the Embankment is all that can be desired. For the convenience of those discharging lumber and deals from the cars into *bateaux* and barges, additional railway siding accommodation has been provided on the north side of the embankment, while in order to facilitate the loading of cars, elevated platforms have been erected on the Embankment.

A wise regulation on the part of the Commissioners, and one that has given general satisfaction to shippers, is that which provides that the space between the railway track, on the south side of the Embankment, and the water of the Basin shall be kept clear of all descriptions of goods during the shipping season, to enable shipments to be made direct from the railway cars to the steamships.

At the instance of the Board of Trade, representing a number of leading importers, the Harbor Commissioners have erected a spacious shed upon the Cross Wall for the accommodation of perishable goods landed on the Embankment. Others will certainly follow, whenever demanded by the necessities of trade.

As indicative of the manner in which these facilities are already being taken advantage of, it will not prove uninteresting to reproduce here a paragraph that appeared in the columns of the CHRONICLE on the 23rd September last. It reads as follows :—

“The Louise Dock is becoming quite an interesting resort for all who take an interest in the trade of the port, and the business done there is significant, even now, of the possible extension of its trade. For instance on one day last week could be seen a steamship from Cape Breton discharging coal near the Gas Works, a steamship loading cattle for Great Britain, another steamer discharging rails for the Lower Laurentian Railway, a large number of cars unloading deals from Lake St. John, and several cars transshipping cotton goods made at the Montmorency mills, and being shipped in C. P. R. cars for Hong Kong and Yokohama *via* Vancouver. At the same time, the mail steamer

from Liverpool was alongside the dock, transferring immigrants to the C. P. R. cars for the Far West. The different cars standing on the tracks were also suggestive—C. P. R., Grand Trunk, Intercolonial, Boston and Maine, Michigan Central, Lake St. John, Montmorency and Charlevoix, and even Northern Pacific cars were to be seen. And all this business occupying only a fraction of the vast space offered to trade by the finest and most convenient dock in this continent."

And on the 23rd October last, the following appeared in the columns of the same paper:—

"The convenience of the Louise Dock was illustrated last week when the ship "Tanjore"—a Quebec owned vessel by the way—loaded a cargo of deals from Roberval, Lake St. John, destined for Rio Janeiro. At the same time the bark "Eden" took in at the same dock a cargo of spoolwood manufactured by Mr. Damase Jalbert, of Lake Bouchette, bound for Paisley. Both cargoes of lumber came alongside the ship in cars, and were handed from the car into the vessel without light-erage or other expense. If the facilities offered by this dock were properly understood, the whole of the Ottawa deal trade should be done here."

CHAPTER IV.

HISTORY OF THE NEW HARBOR WORKS.

The new Harbor Works, at the mouth of the St. Charles, were authorized in 1873, by the Act 36 Vic., ch. 32, sec. 17, and have cost close upon four millions dollars, the sum of \$3,821,000 having been expended upon them up to the 10th December, 1889. They were commenced in 1875, and have thus occupied fifteen years in construction. The original engineers for these works were Messrs. Kinipple and Morris, of the Institute of Civil Engineers of England, who sent out Mr. W. Pilkington to Quebec as resident engineer representing them on the works.

The Princess Louise Embankment and quay wall, on the north side of the first projected series of docks, 3,960 feet long, by 330 wide, was constructed under contract by the firm of Messrs. Peters, Moore & Wright, composed of Mr. Simon Peters, of Quebec, Col. Edward Moore, of Portland, Maine, and Mr. Augustus B. Wright. This firm commenced operations on the 2nd May, 1877, and completed its contract in 1882.

DREDGING.

An immense amount of dredging in the basins contained by these works was executed between 1882 and 1890, under two different contracts, by Messrs. Larkin, Connolly & Co., whose business-like methods of exe-

cuting the work, and magnificent dredges and other plant, were the admiration of all who visited the work during its progress.

The services of Messrs. Kinipple and Morris, as engineers, were dispensed with in 1883, and the works were, with the consent of the Honorable the Minister of Public Works, placed under the charge of Henry F. Perley, Esq., Chief Engineer of the Department of Public Works, Ottawa, as Chief Engineer to the Commissioners.

From a memorandum by Mr. Perley, dated 14th May, 1890, we learn that the contract for dredging which existed between the Harbor Commissioners and Messrs. Larkin, Connolly & Co., from 1882 to 1886, and which was based on plans, &c., prepared by Kinipple & Morris, provided for the payment of the work done at a graduated set of prices according to depth, said prices ranging from 27 to 55 cents.

Early in May, 1887, Mr. Perley, as Chief Engineer to the Commissioners, stated to them that a large quantity of dredging remained to complete the area of the wet basin to a depth of 15 feet at low spring tides, and that it was desirable a portion of the works should be proceeded with during the ensuing summer. He also enclosed a copy of a letter he had addressed to Larkin, Connolly & Co., asking for a price at which they would do the dredging in question, the measurement to be made as previously done, and the material placed either in the embankment or in the river. Messrs. Larkin, Connolly & Co. stated their price to be 35 cents per yard, and a copy of their letter was sent by Mr. Perley to the Commissioners, recommending the offer for their consideration, and stating that he considered the price

fair and reasonable. The offer was accepted and a contract duly entered into, under which dredging was proceeded with during the seasons of 1887, 1888 and 1889.

THE CROSS WALL.

The plans and specifications for the construction of the cross wall and entrance to the Wet Basin were prepared under the directions of Mr. Henry F. Perley, Chief Engineer in the Department of Public Works, Ottawa, and in accordance with the provisions of 45 Vic., chap. 47, and the plans, &c., so prepared were submitted for the approval of the Governor in Council. In the early part of 1887 tenders were publicly asked for this work by the Harbor Commissioners of Quebec and forwarded to the department, and were sent to the Chief Engineer, Mr. Perley, for examination and report. Under date 23rd May, 1883, Mr. Perley submitted a report to the department on the tenders in question, which were found, after their relative values had been determined, to stand as follows:—

John Gallagher.....	\$552,255.00
Larkin, Connolly & Co.	634,340.00
G. Beaucage.....	640,808.50
Peters & Moore.....	643,071.16
J. & A. Samson	864,181.00

The engineer advised that Mr. Gallagher be permitted to withdraw his tender in accordance with his request which stated that he had made serious errors in the same, and also because he (Mr. Perley) believed that the amount of that tender was far below that for

which the works could be executed. This being done, the tender from Messrs. Larkin, Connolly & Co. came next in order, and the Chief Engineer recommended it for consideration by the Minister. After the passage of an Order-in-Council to that effect, a contract was entered into between the Harbor Commissioners of Quebec and Messrs. Larkin, Connolly & Co., and the works were carried out and executed by that firm under the supervision of the engineers of the Harbor Board, how satisfactorily everyone who has visited them and seen their working, and is competent to judge, knows perfectly well. The contract was virtually completed in 1889, with the exception of the caisson, which was finally adjusted and placed in working order in the spring of 1890.

The present year has also witnessed the completion by Messrs. Larkin, Connolly & Co. of the south wall and of the large main sewer which carries off the city drainage heretofore emptied into what is now the wet dock, and deposits it in the St. Lawrence, below low water mark, on the south side of the Custom House.

This brief sketch of the history of these important works would be incomplete without a list of the members and officers of the Quebec Harbor Commission, under whom they were brought to a successful completion.

HARBOR COMMISSIONERS.

P. V. Valin, Esq., Chairman, the Hon. Thos. McGreevy, M.P., R. R. Dobell, Esq., Julien Chabot, Esq., William Rae, Esq., J. Bell Forsyth, Esq., Edmond Giroux, Esq., R. H. Smith, Esq., Joseph Fortier, Esq., President of the Corporation of Pilots,—*ex-officio* mem-

ber of the Commission when acting as pilotage authority ; Frs. Goudeau, Harbor Master ; C. Sullivan, Assistant Harbor Master ; James Woods, Acting Secretary-Treasury, Chief Clerk and Book-keeper ; Ulric Binet, Clerk ; Henry F. Perley, Chief Engineer ; St. George Boswell, Resident Engineer ; H. LaForce Langevin, Assistant-Engineer.

The late Secretary-Treasurer, who resigned a few months ago, was Mr. A. H. Verret.

CHAPTER V.

QUEBEC'S FACILITIES FOR HANDLING THE THROUGH TRADE OF THE CANADIAN PACIFIC RAILWAY.

It is destined to be the Eastern Point of Transshipment on the Canadian Transcontinental Route.

Quebec's position as the eastern terminus of the Canadian Pacific Railway is destined to make her a leading point of transshipment for the enormous trade that must eventually be established between the great east and the great west across the Canadian transcontinental route. The comparatively recent completion of this great highway across the continent forbids the expectation that it should yet have entered into very serious competition with other routes for the world's commerce between Europe on the one side and Asia and Australasia on the other. The other links, too, in the new chain of communication, and particularly the transatlantic steamship service that is one of its most necessary and most important connections, have not yet been brought up to that standard of excellence necessary to the perfection of the through Canadian route. When the new and improved fast mail service contemplated by the Dominion Government shall have been established between Europe and Quebec, and the peers

of the ocean greyhounds now sailing between Europe and New York shall be sailing from and arriving at the port of Quebec, weekly or oftener, then the bulk of the world's commerce between East and West will find its way over the Canadian route as the shortest and most expeditious. "It is the future highway," says Mr. Geo. Johnson, of the Federal Department of Agriculture, "between Great Britain and most of her important colonies in the Pacific Ocean. It is the shortest and best route from England to China, Australia and New Zealand, and over the road in the near future, must military and postal communications be maintained between the Home Government and its leading dependencies. The necessity for the maintenance of such expensive posts as Gibraltar, Malta and Aden seems largely cancelled by the opening of a route all the way over British territory, far removed from hostile surroundings and requiring no coaling stations nor fortifications on exposed and isolated promontories, in time of war, involving enormous outlay for their protection and maintenance. It was a singular coincidence and perhaps a prophetic omen of the future Imperial importance of the railway, that the first loaded train that passed over its entire length, from ocean to ocean, was freighted with naval stores belonging to the Imperial War Department, transferred from Quebec to Vancouver. * * * * The popular idea no doubt is, that the St. Lawrence with a general south-west bearing, has its mouth altogether too far north of the proper course to form an advantageous route to China or the East Indies, much less to Australia or New Zealand, yet Quebec is five degrees south of London, England, and two degrees south of Victoria, in British Columbia,

and the Canadian Pacific follows the 46th parallel of latitude very nearly for a thousand miles west of Quebec, and then, rising to the 50th degree to go north of Lake Superior, runs south of that in its course west to the Pacific. The general idea is that Canada is too far north for the air line distance to Japan or the East and that New York and San Francisco are more nearly in a direct route; yet Yokohama is 250 geographical miles nearer to Vancouver than to San Francisco."

From Vancouver to Quebec in an air line, the distance is nearly 70 miles less than it is between San Francisco and New York, whilst the distance from Liverpool is 469 miles less to Quebec than it is to New York. It is nearly 700 miles in an air line nearer from Yokohama to Liverpool by way of Montreal than it is by New York. Taking the shortest railway route across the continent from New York to San Francisco, as actually constructed, there is an advantage of nearly 1,000 miles by the Canadian route. The exact saving in both mileage and time by the Canadian route is thus graphically and concisely set forth by Mr. Johnson:—

"From San Francisco to New York, by the shortest railway route through Omaha and Chicago, the distance is 3,271 statute miles against 3,053 miles by the Canadian route to Quebec. At 35 miles an hour it would require 93½ hours by the American line and 87 by the Canadian line, supposing the circumstances to be the same in both cases. But there is a long ferry from San Francisco of five miles and there are heavier grades and greater altitudes, up which the trains have to be lifted, and delays at important stations make it impossible to work the American through line as expeditiously as the Canadian. Taking the actual running time made

by the fastest service between New York and San Francisco there is a difference of 50 hours between the two railways, or 137 hours against 87. In winter the difference will be even greater, long lengths of the American line, aggregating one-half of the distance between Omaha and the Pacific, being at an elevation of 5,000 feet above the sea, 500 miles being over 6,000 feet and 400 miles over 7,000, whilst the Canadian line has a summit nearly 3,000 feet lower than its rival crossed in a very few miles. Quebec again is 2,661 geographical miles from Liverpool, New York 3,130—a difference of 469 miles, which at 15 knots requires 31 hours. There is thus a total saving of 16 days on the Pacific Ocean, 50 hours on the inter-oceanic railway and 31 hours on the Atlantic, or a total of four days and one hour. Putting the figures of time and distance together we have as follows :—

IN DISTANCE.	Pacific Ocean.	Railway.	Atlantic.	Total.
By San Francisco and New York.....	4,470	3,271	3,130	10,871
By Vancouver & Quebec	4,232	3,053	2,661	9,946
Saving in miles.	238	218	469	925

IN TIME.	Pacific Ocean Days.	Railway Days.	Atlantic Days.	Total Days.
By San Francisco and New York.....	12.10	5.17	8.16	26.19
By Vancouver & Quebec	11.18	3.15	7.09	22.18
Saving in time.....	.16	2.02	1.07	4.01 "
				*

* "Canada : Its History, Productions and Natural Resources,"—a handbook of Canada for the purposes of the Colonial and Indian Exhibition, 1886, by George Johnson, Ottawa,—pages 86-87.

It being thus so clearly demonstrated that the saving both in distance and in time, which is now more than ever the equivalent of money, must at an early date secure the bulk of the world's commerce between east and west for the Canadian route, let us see what facilities Quebec possesses for the handling and transshipment of this enormous trade.

The extent of our wharfage and dockage has been fully described in a former chapter, and the accommodation for transshipment on the Louise Embankment alone is such that a dozen trains of cars could load or discharge freight at the same time. There are already half a dozen railway tracks on the whole length of the Embankment of 3,960 feet, and room for more than as many more, for the Embankment is already 330 feet wide, and might easily and inexpensively be enlarged towards the north to any width that the exigencies of trade might demand. The railway tracks upon the Embankment are connected by switches with the main line of the C. P. R. at the Palais, so that within a couple of minutes from taking on cargoes of through freight from vessels lying in the Louise Basin, trains can be switched on to the C. P. R. through route and steam away on their trans-continental journey to the Pacific Coast. No other point affords such facilities as Quebec for the handling and transshipment of freight between east and west on the new Canadian route, the dispatch attainable here being such that freight transhipped into cars in this port would be miles west of Montreal on its way to Vancouver, before the steamship that brought it across the Atlantic could have reached Montreal with its cargo on board.

The local officials of the C. P. R., and in particular

Mr. J. W. Ryder, City Freight and Passenger Agent, and Mr. Hall, Local Superintendent, have always done all in their power to facilitate trade in Quebec, and have proved themselves exceedingly courteous and obliging to all with whom they have come into contact.

The port of Quebec owes much to the fact that it is the eastern terminus of that great artery of Canadian commerce, the Grand Trunk Railway. The want of a railway bridge over the St. Lawrence at this port has always been severely felt by the city of Quebec, but the Grand Trunk Railway has lost no opportunity of improving its connections between the two sides of the river here, and within the last two years has largely increased its facilities for doing business on the Quebec side by enlarging its station and other premises at the landing place of its ferries, and devoting them all to the development and accommodation of its freight business with the Ancient Capital. . This has been accomplished by means of a considerable outlay of money and by a radical change in the accommodation of its Quebec passenger business. Instead of walking or driving around to the Quebec station of the G. T. R. where freight is handled, passengers now cross directly by the Quebec and Levis ferry, which lands them immediately alongside the trains of the Grand Trunk at the Levis station.

The benefit conferred by the Grand Trunk Railway upon Point Levis is incalculable. The amount of money expended in that locality in the way of wages, etc., is very heavy, and the number of people directly

or indirectly benefitted by the Company would make up the population of a thriving town. In fact nearly every family from Point Levis to Hadlow Cove is in one way or other connected with this public-spirited and powerful corporation. Although not as yet having the trains of the Company actually running into our city, Quebec has reaped in the past and will in the future reap many advantages from its connection with the Grand Trunk Railway, and it is the desire of every man having the interests of this port and community at heart to see the business and operations of the Company continue to expand and thrive.

The eastern freight terminus of the Grand Trunk Railway is situated at Point Levis or South Quebec, immediately opposite the Plains of Abraham, affording a fine view of that historic ground. It can be reached from Quebec either by the Company's special ferry which lands at the railway pontoon, or by the boats of the Quebec and Levis Ferry Company, landing lower down in the town of Levis. Here, until the new arrangements for the better accommodation of the Quebec passenger business were made, it was necessary for all Quebec passengers to be conveyed in order to reach the company's trains.

The yard, so called by railway men, and which covers enough of ground for a respectably-sized town, contains all things necessary for carrying on a most extensive railway business. Immediately on entering it one meets a long row of brick buildings, wherein provision is made for the clerical staff, telegraph office, waiting-rooms for first and second-class passengers, Canadian and American Customs officers, baggage rooms, etc. Running almost parallel with this build-

ing is a freight shed, substantially built, measuring three hundred and fifty feet in length, and which is at present crowded to its utmost capacity by merchandise of all kinds. The wharves on which this shed stands are capable of containing an almost unlimited quantity of goods that do not suffer from exposure to the weather. Attached to the main wharf is a covered pontoon for shipping and landing goods on or from the ferry steamer.

Directly to the east of the pontoon is the wharf, upon which are built the steamship shed and immigrant buildings, the latter of which will be noticed at greater length when we come to deal with Quebec's facilities for the transshipment of immigrants.

Besides the above, in an insulated position, is a metal-covered building for the storage of oil and other inflammable substances, the greatest care being taken to prevent damage arising from fire. And here we may state that special means are provided to fight a conflagration. All the buildings are provided with chemical extinguishers and an abundant supply of water is always kept on hand.

The freight traffic of the Grand Trunk Railway for some time past has been enormous, and the officials of the Company have been at times pretty sorely pressed, but their splendid organization has always prevailed, and every demand upon the railway been promptly met and all contracts faithfully carried out. Heavy trains arriving frequently crowd their sheds, but before many hours elapse the goods are delivered to the consignees, thus making room for fresh arrivals. Quite an army of men is engaged handling freight, but the in-

crease of local traffic has caused an extensive addition to be made to their number ; until now the force has had to be divided into three gangs, and these, by working far into the night, have been enabled to keep the wharves and sheds clear for the next trains.

The large lot of land occupied by the Company at Point Levis would appear to the uninitiated to be sufficient to accommodate half the railway business of the country. Any one supposing such to be the case would be laboring under quite a delusion, for we are informed that if the Grand Trunk did not transfer its Lower and Upper Province freight with the Intercolonial Railway at Chaudière Junction, it would be completely blocked at Point Levis in a very short time.

Apart from the numerous tracks for trains that the Company has in its yard at the terminus, it possesses a number of wharf sidings, *i.e.*, rails that run on to private wharves for the convenience of merchants engaged in the timber and coal business. By this means timber, deals, etc., are carried from the West and placed alongside vessels receiving cargo for foreign ports.

A new branch of business that the Grand Trunk is endeavoring to cultivate is the trade in flour between this port and Newfoundland. The idea is to induce the owners of schooners and coasting craft to take cargoes of flour and other produce here and carry it to Newfoundland, where there is a ready market for it. The attempt is only in its infancy yet, but there is no port better adapted for such transshipment than Quebec ; the only opposition in the way being steamers engaged in the coal trade.

From the thoroughness of its local equipment at

South Quebec, and its proximity to all the wharves on the south side of the harbor, it will be understood that the Grand Trunk Railway possesses magnificent facilities for handling here the whole of the freight and passenger business destined for conveyance westward by this old favorite and reliable route. A portion of this business has hitherto been considerably delayed *en route*, by being carried past Quebec on board the transatlantic steamships, to be transhipped on to the cars at Montreal. How mistaken is this policy is shown not only by the superior facilities for the transshipment of passengers and cargoes from the steamships to the trains of the G. T. R. offered by the port of Quebec, but by the additional fact that the passengers and cargoes so transhipped would gain so much in dispatch that they would, as a rule, reach Toronto before the steamships that brought them out could arrive in Montreal.

The local arrangements for the convenience of shippers and passengers at Quebec leave little to be desired. Passengers' baggage is all checked on the Quebec side, at the ferry wharf, and T. D. Shipman, Esq., the City Passenger Agent, and R. M. Stocking, Esq., of the office opposite the St. Louis Hotel, are amongst the most experienced and most obliging of the Company's agents. The Station Master at Quebec, who is to be found at the freight station on the G. T. R. wharf, is Mr. Joseph Quinlan, and Mr. Smallhorn is the efficient Agent and Station Master of the Company at South Quebec.

CHAPTER VII.

QUEBEC'S FACILITIES FOR THE TRANSHIPMENT OF IMMIGRANTS.

The Immigrant Sheds at South Quebec and on the
Louise Embankment.

Quebec is the Castle Garden of Canada. It is the only seaport upon the St. Lawrence where suitable accommodation has been provided for the reception of immigrants.

On either side of the river, and in connection with both Canada's great railroads, the Grand Trunk and Canadian Pacific, our port has been supplied with the most thorough facilities for the accommodation and transhipment of immigrants. Here they may land immediately from the steamships into comfortable buildings provided for their shelter, alongside of which are drawn up the cars which are to convey them to their western homes. In other ports, and notably in Montreal, the immigrants are dumped on to open and shelterless wharves where no provision is made for their comfort, and where they must often remain for hours, awaiting transhipment on board the cars. They are jostled amongst trucks and drays and scattered amongst piles of baggage, merchandise or coals, the prey of land sharks who hang about the piers

for want of better employment or with the object of fleecing the unwary.

Yet there are steamships that in order to suit their own convenience, insist upon carrying immigrants past Quebec, and depositing them like cattle upon the bare and inhospitable wharves of Montreal. The life, the quarters and the experiences of steerage passengers while crossing the ocean are not, to people of delicate constitutions or refined dispositions, of the most pleasing character, and in many cases it is absolute cruelty to induce them to continue on board the steamer to Montreal, prolonging their misery on shipboard, causing them the loss of a day or two of time *en route* to their destination, and depriving them of the comforts and advantages of being landed, protected, guided and transhipped at Quebec, where everything that is needful has been provided with a view to their safety and convenience.

The mail steamships of the Allan and Dominion Lines land their passengers alternately at the Louise Embankment, alongside the Government Immigration sheds and C. P. R. trains, and at the Grand Trunk Railway wharf at South Quebec, alongside the trains and immigrant buildings of that line. Passengers booked for the west by the other line are then immediately crossed with their baggage, by ferry. On both sides of the river every convenience is to be found for the accommodation of immigrants.

The steamship shed of the G. T. R. at South Quebec, is three hundred feet in length, and is placed on the centre of the wharf. A vessel of the deepest draught can safely come alongside the latter and land her passengers and freight directly into the building, while

on the opposite side the railway cars are placed ready to receive both, thus obviating any delay in transshipment. A little more to the west is a neatly constructed building containing the offices of the Immigration Department, wash and bedrooms, ticket office, and waiting room, while almost immediately adjoining are dining rooms, exchange and store, containing all kinds of articles required by parties travelling. All the departments in the two latter buildings are under Government supervision.

In regard to the forwarding of immigrants the arrangements of the Grand Trunk may well be said to be complete. The immigrant is taken from the ship, and, after examination of his luggage by the Customs authorities, placed on the cars. He has no occasion to leave the wharf at Point Levis, for every article he requires is there to be had. In addition, the Company has a number of policemen on duty to prevent runners or land sharks interfering with the strangers, and any one seen striving to induce or entice the passenger away without proper authority is immediately required to leave the wharf. Attached to each immigrant train is a special car with an interpreter, and this interpreter conducts all the passengers on that train to their destination. He is held responsible for each and every one of them in his charge, as well as the baggage, and may be called upon at any moment by his superiors to account for some particular passenger, or his or her baggage. The interpreter is thus kept continually on the look-out, and it is next to impossible for the immigrant to go astray.

Four to five hours after the arrival of steamships at the wharf, their immigrants are transhipped on to the

cars of the Grand Trunk Railway and started on their westward journey. They invariably reach Toronto on the following day, generally before the steamship upon which they cross the Atlantic has reached Montreal.

The same dispatch is noticeable in regard to immigrants shipped from Quebec by C. P. R., in striking contrast with those who proceed to Montreal on board the steamship. As a rule, the steamships arrive in port on or about Saturday. Passengers leaving here by special on the C. P. R. that day or by the regular 1.30 p.m. train, connect in Montreal that night with the through train to the West for the Pacific Coast or Western States. They thus gain 48 hours over passengers proceeding to Montreal on board the steamship. Not only do they reach Toronto on Sunday by the time the steamer reaches Montreal, but they are able to continue on their westward journey without delay, while the passengers by steamer must remain till Monday in Montreal, because no train leaves that city on Sunday for the West.

The accommodation afforded for immigrants at the Government buildings on the Louise Embankment is the finest in Canada. The main building is 400 feet long, of two stories, and surrounded by a covered gallery. In case of necessity, from 4,000 to 5,000 immigrants could here be accommodated at one and the same time. There are comfortable sitting and dining rooms, and offices for exchange of money, tickets, &c., and for the Customs examination and checking of baggage. Dinners and refreshments of all kinds are supplied by Mr. A. Marquette, the Government caterer, at moderate rates. Mr. Ryder, of the C. P. R., and his staff of assistants are always on hand on the arrival of

passenger steamships, and Mr. T. D. Shipman, of the G. T. R., has also established an office on the embankment for the convenience of passengers landed here and destined for the Grand Trunk. Their tickets are changed and baggage checked here, and they are then immediately transferred by ferry to the G. T. R. trains in waiting for them at South Quebec.

The whole department of immigration at Quebec is controlled by the Dominion Agent, Mr. Lawrence. Stafford, who is aided by Mr. P. Doyle, Assistant; Mr. Stein, Chief Clerk, and Mr. D. J. Power, Clerk, while the wants of foreigners unable to speak English or French are looked after by Messrs. W. Anderson, Scandinavian interpreter, and J. Zingerlee, German interpreter. Immigrants destined for the Province of Quebec are specially looked after by Mr. W. S. Desbarats, Provincial Agent, and Mrs. Corneil has a special mission to see to the comfort and safety of otherwise unprotected females arriving here without escort. The buildings are cared for by six guardians and are provided with pure drinking water and also with baths and all others conveniences, in striking contrast with the utter lack of accommodation awaiting such immigrants as are cruelly landed upon the open wharves in the port of Montreal.

CHAPTER VIII.

QUEBEC'S FACILITIES FOR HANDLING THE EXPORT CATTLE TRADE OF CANADA.

During the last few months, the attention of those interested in the Canadian export cattle trade has been specially attracted by the exceptional facilities afforded at Quebec for the handling of live stock from the West, destined for the English market. This trade promises in the very near future to attain immense proportions. Two years ago 50,000 cattle were shipped from Canadian ports to Great Britain; in 1889 the number was 75,000 and this year it has exceeded 100,000. With the increase of cattle and of the ranching industry in the Great North-West, it is indeed difficult to foresee to what dimensions this commerce may ultimately attain. Heretofore the shipment of live stock from Canada was mainly carried on at Montreal, where it is attended by so many and such great dangers that it is only surprising that the trade was not completely blotted out in its very infancy. No accommodation of any kind is provided for the unfortunate cattle after their long journey by rail from the West. They are driven for miles through the streets and over the wharves of the city, forced to pass between all kinds of vehicles, and merchandise, and are frequently so confused and frightened as well as fatigued by the excitement of the journey and of their surroundings, that even if they have escaped other injury before reaching

their ship, they leap from the wharves in their bewilderment and find themselves floating in the river. That this is no fanciful or overdrawn picture, there is ample testimony in the complaints of the Montreal shippers and newspapers.

Equally disinterested evidence as to the advantages offered by Quebec for the accommodation of this trade has been frequently furnished during the past season, and the facilities in question are open to the inspection of all who care to see them.

The C. P. R. trains from the Canadian North-West run direct upon the Louise Embankment with the cattle on board, and the system of transhipment from the cars to the steamships is here the most perfect imaginable. A comfortable gangway is laid down from the car to the ship and the cattle walk over it, railed in on either side, and in less than a minute from leaving the car are safely housed in their stalls on board the vessel. When one car is emptied,—and only a very few minutes are occupied in the operation,—the train is shunted until the next car is brought opposite the gangway, and so the work goes on with the utmost comfort to both the cattle and their attendants, and in the most orderly and methodical manner possible. This was practically illustrated in the recent loading, at the Louise Embankment, of the steamships "Osmanli," "Linda" and "Serica." There is ample space upon the embankment for the erection of whatever sheds may be demanded by the requirements of the trade for the shelter of cattle arriving here during the heat of summer, while any consignments that might have to remain here for a day or two awaiting steamship accommodation, would benefit materially by the rest, and

could enjoy a healthful change calculated to fortify them against the fatigue of their voyage, by being allowed to graze upon the Côte de Beaupré, to and from which they could be conveyed by the cars upon which they were shipped, and over the line of the Quebec, Montmorency and Charlevoix Railway.

It must not be forgotten that for cattle arriving here for shipment to Europe by Grand Trunk Railway, very superior accommodation exists on the south side of the river, where at South Quebec that enterprising and progressive railway company erected years ago, while the trade was yet in its infancy, a well-built and properly ventilated structure, capable of accommodating 1,000 head of cattle at a time. Here the animals may be placed on arrival to await transfer to ocean steamers, and to secure the rest necessary to enable them to endure the fatigue of a sea voyage. It has been noticed that cattle thus maintained, after a long railway journey, have always presented a superior appearance on debarkation in the United Kingdom.

The avoidance of the dangers and fatigues incidental to the shipment of cattle in Montreal, is not the only advantage accruing to the cargoes of live stock that are shipped at Quebec. Cattle brought from Montreal to Quebec in cars with open sides, avoid the long and tedious river voyage in close and heated confinement on board the steamships, which is usually productive of so much fatality. In the heat of summer, scores and even hundreds of cattle have frequently died from the effects of this confinement, and it has sometimes happened that the river has been dotted with the carcasses of the unfortunate victims of shipment in Montreal, thrown overboard after death. The cattle shipped at

Quebec, on the other hand, have scarcely left the port, even in the hottest months, before they meet with the cool, refreshing salt-sea breezes of the Lower St. Lawrence and Gulf. Amongst the cattle so shipped, scarcely a death has ever been known to have occurred in the river on shipboard.

It may well then be asked why shippers export at all from Montreal, instead of bringing all their cattle to Quebec for shipment. In the first place it must be remembered that these shippers are chiefly Montrealers, and the proverbial partiality of Montreal's citizens for their own city and port, no doubt goes a long way towards accounting for their persistency in continuing such shipments from Montreal notwithstanding the disadvantages with which they have there to contend. A similar persistence on the part of Quebec lumber merchants to ship cargoes of lumber from their own port would aid materially in giving this port a fair share of the export cattle trade, for the steamships carry mixed cargoes of deals and cattle and prefer to ship live stock where they take on their lumber. The Quebec Board of Trade has taken a very active interest in this matter during the past season, and it is largely due to the efforts of President Turner and his Council, and to the initiative and active co-operation of the Messrs. Kennedy, the agents of the "Osmanli," the "Linda" and the "Serica," the first steamers to take cattle on board at the Louise Embankment, that the successful experiments in question were made. To the Harbor Commissioners, too, is due no small credit for the facilities which they have placed at the disposal of the cattle men upon terms that materially reduce the cost of shipment at this port. These facilities and these

terms were granted after the representations on the subject made by the President and Council of the Board of Trade, who are consequently entitled to favorable notice in this place. Richard Turner, Esq., of the firm of Whitehead & Turner, and one of Quebec's most enterprising and most public spirited merchants, is President of the Board of Trade, and Victor Châteauvert, Esq., of J. B. Renaud & Co., is Vice-President. The members of the Council of the Board are Messrs. S. Sloane Bennett, Treasurer; N. LeVasseur, Secretary; O. Migner, T. Brodie, H. M. Price, F. X. Berlinguet, Dr. E. Morin, E. H. Wade, W. Rae, Col. J. B. Forsyth, J. E. Martineau, Félix Gourdeau, B. Verret, N. Garneau and E. B. Garneau.

No stronger evidence of Quebec's superior facilities for doing this trade, and of the disgraceful condition of affairs with which the cattle shippers have to contend in the port of Montreal, can be possibly furnished, than that of prominent Montrealers themselves, interested not only in the cattle trade but also in the prosperity of the city and port of Montreal. The following interview with Mr. Bickerdike is from the columns of the *Montreal Witness* :

"Quebec wants the cattle trade and Montreal doesn't, so we are therefore going to give Quebec all we can of it."

This was what Mr. Bickerdike said to a *Witness* reporter in answer to the question how much of the trade Quebec was likely to get.

Mr. Bickerdike, in company with Mr. Cunningham, Secretary of the Live Stock Association, has gone to Quebec to see the loading of the "Linda" with 600 head of cattle, and while in the Ancient City will make arrangements for further shipments from that port.

Mr. Bickerdike says the C. P. R. is going to carry the cattle down at a little over fifty cents a head, that hay can be bought cheaper down there, that ten cents per head wharfage is saved, and that every facility is being offered by the city for the shipment of cattle from that port.

"Should Quebec get all these tramps or outside steamers, Mr. Bickerdike, what would it amount to?" asked the reporter.

"Well, it would amount to one-fourth of the cattle trade. I don't say, remember, that Quebec can ever capture the entire cattle trade from Montreal, but it can get that fourth and get the grain trade also, or a large portion of it. They are working towards that end now. I tell you that Montreal would fast become a modern Chicago, if only our Harbor Commissioners and City Council would awake to the importance of this trade. They don't seem to realize the importance of it, and give us no facilities whatever, although we have continually asked them. Two years ago we shipped 50,000 head of cattle, last year about 75,000 and this year the total will reach 100,000 cattle and 50,000 sheep. You see the enormousness of the trade. What would our port do without it? Why, only the other day we put \$54,000 worth of cattle on a steamer and neither the Harbor Commissioners nor the city spent ten cents in securing us facilities. What was the result? Twenty-four cattle in the river bleeding and bruised; others running wild among cargoes of pig iron and barrels of molasses; no place to water the poor brutes; no sheds to put them into. Are our demands unjust? On wharfage alone we will pay the port from \$12,000 to \$15,000 this year, whereas in Quebec it would cost us nothing, and they are willing to give us all we want.

"Have none of the shipping companies given you any facilities, Mr. Bickerdike?"

"The Beaver Line people certainly have helped us all they can. They have built a shed where the cattle are put previous to shipment, which is a great boon."

“What is it you want the city to do for you?”

“We want the five cattle markets to unite and form one grand union stock-yard convenient to the wharf where all the cattle coming down can be landed from the trains and taken from there on board the steamers without having to be driven six miles through crowded streets. This would save the poor brutes from having to climb over barrels, scrap iron or other miscellaneous cargo. Yes, we must have union stock yards as in Chicago and New York, and that before long. The trade will grow with unprecedented rapidity and we have got to be able to handle it. The *Chambre du Commerce* is discussing the question. They see no reason why Quebec should have the trade.”

The *Herald* of 13th September last had the following:

“Quebec is going to have a share of the cattle trade. Her people are very much in earnest in pushing the business and affording facilities, and they are achieving a considerable degree of success. So far so good; Quebec's success is not necessarily so much taken from Montreal. There is ample trade for both if—and on that (if) the point rests—the proper facilities for shipping cattle are provided by the authorities of this port. These are wanting, owing to the apathy of those whose duty it is to provide such facilities. The Harbor Commissioners as well as our City Council and Board of Trade will have to bestir themselves without delay if they wish to see our cattle trade increase as it may easily be made to do. It will not do to rail and sneer at Quebec as some people and papers are doing; that will not mend matters here and it will not prevent the cattle trade going to Quebec if the authorities of that city furnish better facilities than Montreal is doing. It is a matter of business and the port that furnishes the best facilities for shipment of live stock will certainly come out ahead. That is the point the people of Montreal require to keep in view. They need not grudge Quebec her share, but rather strive to increase the cattle trade of the St. Lawrence. That will keep Montreal all right.”

Immediately after the return of Messrs. Bickerdike and Cunningham to Montreal from loading the first cargo of cattle here, a reporter called upon those well-known live stock shippers and leading members of the Cattle Exchange to obtain some information with regard to their trip to Quebec. Mr. Bickerdike, on being asked if he thought Quebec suitable for shipping purposes, said :

" It is the finest place in America for shipping. The Louise Basin there has sufficient accommodation for the next ten years. There is 28 feet of water and the tide makes no difference owing to the basin having flood gates. We called on the Quebec Board of Trade and they are willing to do anything for us if we will guarantee them sufficient business. Now, we cannot guarantee them our business, but we can patronize any steamer unloading and wanting cargo at Quebec."

" How much do you think you will be able to give Quebec? "

" About a fourth of our trade. Of course we have got to ship some of our cattle with regular lines, who will not stop at Quebec to take cargo. But something must be done in Montreal. We must have a union stock yard with railway facilities, to save us driving cattle through the streets. Why, in Quebec the cars run up alongside the basin and all that is wanted is a stock yard and there is plenty of room to build it on. One thing is quite certain, Quebec is very anxious to get our trade and will do anything for us, whereas Montreal does not trouble about us. While in the ancient city we loaded 600 head of cattle on the " Linda " without the least trouble. Down here our cattle are all over the wharves and now and again some get into the river. Our cattle are injured and do not fetch such high prices on the other side."

The reporter drove along the wharves with Mr. Cunningham and inspected the places over which the cattle have to be driven. That no better facilities exist is

certainly a disgrace to the city. There is no protection whatever for cattle. They have the run of the whole wharf as a romping ground. There are no water troughs visible, nor is there anything to prevent the cattle from jumping into the river. Shelter there is none, with the exception of the solitary sheds built by the Beaver Line. At the loading of a steamer with cattle there is a scene of chaos. The cattle rush over the piles of cargo and often cut themselves severely. The cattlemen lose control of them, and perhaps find them swimming in the river. Only a day or two ago a poor brute was jammed in among some floating wreckage in the river, where it had spent an entire night.

The Montreal newspapers bear frequent testimony to the injurious treatment of cattle upon the wharves of that city, as witness the following from a recent number of the *Montreal Gazette* :—

“ The *Gazette* has on more than one occasion drawn attention to the gross cruelty practiced on animals on the wharf, and yesterday afternoon those loungers who frequent the water's edge and take a delight in witnessing the sufferings of poor beasts had no end of what they call fun. A drove of cattle were being hustled along, when one of them suddenly either could not or would not go any further. It lay down, and despite all methods adopted, stolidly refused to budge one inch. At length a lorry was obtained, ropes were brought forward and by dint of tail-twisting and other like torturings the poor panting beast was got on its feet, one individual who had been particularly prominent in arousing the animal, receiving a kick for his pains. Then the poor brute made a dash for the crowd which was collected round, but it was brought up short by a rope attached to its horns and fastened to the revetment wall, whereat the spectators laughed exceedingly. They were having no end of so-called fun. The animal's legs were then bound together, and some half-dozen burly men commenced to drag the poor beast on to the lorry. The tail was the most con-

venient point to handle and there was quite a dash for the caudal appendage. A couple of strong fellows got hold of it and pulled away for dear life, whilst others tugged at the hind legs and others hauled at a rope fastened to the horns. The more the poor brute made fruitless efforts to get free from its bonds and inhuman persecutors the more hilarious the crowd became. At last the animal was secured on the lorry and driven away. The great work was accomplished and the brutal fun was at an end. And where, it may be asked, were the police, who are supposed to assist the Canadian Society for the Prevention of Cruelty to Animals by keeping their weather eye open for such cases as the society takes cognizance of. They were nowhere to be seen."

CHAPTER IX.

SOME OF QUEBEC'S PRINCIPAL SHIPPING.

The extent of the commerce and shipping of the port of Quebec has been already referred to in the first chapter. A study of the port could scarcely be considered complete without at least brief reference to the principal steamship and steamboat lines doing business here.

The Canadian Trans-Atlantic Mails are conveyed by the Allan and Dominion Lines of steamships, whose vessels sail from Quebec for Liverpool and *vice-versa*, weekly, during the summer months.

The Allan fleet, which was originally established by the late Sir Hugh Allan, of Montreal, consists of the following double-engined, Clyde-built, iron and steel steamships :—

	Tons.		Tons.
Acadian	931	Newfoundland	919
Assyrian	3,970	Norwegian	3,523
Austrian	2,458	Nova Scotian	3,305
Brazilian	4,100	Numidian	4,750
Buenos Ayrean	4,005	Parisian	5,359
Canadian	2,906	Peruvian	3,038
Carthaginian	4,214	Phoenician	2,425
Caspian	2,728	Polynesian	3,983
Circassian	3,724	Pomeranian	4,364
Corean	3,488	Prussian	3,030
Gresian	3,613	Rosarian	3,500
Hibernian	2,997	Sardinian	4,376
Lucerne	1,925	Sarmatian	3,647
Manitoban	2,975	Scandinavian	3,068
Mongolian	4,750	Siberian	3,904
Monte Videan	3,500	Waldensian	2,256
Nestorian	2,689		

The steamships of this line are built in water-tight compartments, are unsurpassed upon this route for strength, speed and comfort, and are fitted up with all the modern improvements that practical experience can suggest, the "Parisian" and the "Sardinian" being illuminated throughout with the electric light. In addition to their Liverpool, Derry and Quebec service, the Allans maintain a special weekly steamship service between Quebec and Glasgow and a tri-monthly one between Quebec and London. They also have a line to St. John's, Newfoundland, and another to Baltimore.

The Dominion Line has a steamship service between Montreal and Bristol which does not enter into the scope of the present sketch. The vessels of its fleet that trade between Quebec and Liverpool are the

	Tons.		Tons.
Vancouver.....	5,217	Labrador (building).....	6,000
Oregon.....	3,716	Knight Companion.....	3,877
Sarnia.....	3,716	Indrani.....	3,584
Toronto.....	3,315	Ontario.....	3,176
Dominion.....	3,176	Texas.....	2,817

The "Vancouver" is lighted throughout with the electric light, and has proved herself one of the fastest steamers on this route. The "Vancouver," "Oregon" and "Sarnia" have saloon, state-rooms, music-room and bath-rooms amidships, where but little motion is felt.

The steamers of the Beaver Line, some of which are over 5,000 tons each, no longer stop in the port of Quebec, thus depriving the steerage passengers, whom they bring out from England, of the superior facilities provided for their comfort and accommodation here, and submitting both passengers and freight destined for western points to a tedious and unnecessary delay, since, by the time they are landed in Montreal and

transhipped for the West, they would, if transhipped into the cars at Quebec, have been at least as far west as Toronto. Merchants in Toronto and other western points desiring dispatch for their importations, find it impossible to do business with steamships that do not discharge freight at Quebec. If they be dry goods importers for instance, and submitted to have their importations come as far west as Montreal by steamship, their new goods would be only leaving that city when merchants there had the same on exhibition in their shop windows. Thus, purchasers who arrived in Toronto in the morning to find merchants just opening up their new importations might have seen and even purchased the same class of goods on the previous day in Quebec at Glover, Fry & Co.'s or in Montreal at Carsley's.

There are, of course, a very large number of independent steamers running between Great Britain and Quebec, and also between Quebec and the coal and other ports of the Lower Provinces, besides steamers of the Ross, Donaldson, Hansa, White Cross, Thomson, Bossière and Black Diamond Lines.

The s.s. "Miramichi," of the Quebec Steamship Company, is a regular liner between Quebec and Prince Edward Island, calling at Father Point, Gaspé, Mal Bay, Percé, Summerside, Charlottetown and Pictou. This steamer does a very large freight and passenger business, and has excellent accommodation for tourists and others. The careful management of this company, which is entirely a Quebec concern, enables it to successfully maintain excellent lines of steamships between New York and Bermuda, and New York and the Windward West Indies.

The lines worked by this company and the steamers that perform the service are as follows :—

New York and Bermuda Royal Mail Line.

S.S. TRINIDAD.....	2,162 tons.
S.S. ORINOCO.....	1,864 “

New York and Windward West Indies Mont. Line.

S.S. CARIBBEE.....	2,007 tons.
S.S. BERMUDA.....	1,284 “
S.S. MURIEL.....	1,232 “
S.S. FLAMBOROUGH.....	993 “

Montreal, Quebec and Maritime Provinces Line.

S.S. MIRAMICHI.....	727 tons.
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The steamship “Beaver,” belonging to A. Fraser & Co., sails fortnightly from Quebec for the Gaspé coast and Baie des Chaleurs as far as Paspebiac, and the same enterprising firm owns and runs the s.s. “Otter,” which carries the mails to the north shore of the Gulf and forms a regular line from Quebec to Bersimis, Esquimaux Point, Natashquan and other points.

Of purely river steamboats trading to the port of Quebec, the palm must, of course, be given to the boats of the Richelieu and Ontario Navigation Company, which run through to the Saguenay river from lake to ocean, a distance of 1,000 miles, under one management from Niagara Falls to Chicoutimi. The President of this powerful Company, the Hon. Thomas McGreevy, is a Quebecer, and it is estimated that, including officials, crews, laborers and agents, the Company's employees number fully 3,000 men.

The upper or lake line of this Company comprises

the only boats belonging to it that do not run to Quebec, for at Montreal, passengers are transferred to the larger and much more elegant and commodious steamers "Quebec" and "Montreal" for this port. These magnificent floating palaces are the admiration of all Canadian tourists, and very little inferior to them is the large three-decked steamer "Canada," that has latterly been put upon the Saguenay route with the "Union."

The supply of tugs and tow boats owned in Quebec is enormous. These are of all sizes and capacities, some of which seek employment in towing from points far below the port, while others are chiefly engaged between Quebec and Montreal.

A fair idea of the immense coasting trade done by the port of Quebec can only be had by paying a visit to the forests of masts at the Palais and on the south side of the new Louise Basin, where schooners and bateaux throng several deep about the wharves.

With the nearer parishes constant communication and a lucrative trade is maintained by a number of comfortable and commodious market boats and ferry steamers, which ply as well to the Island of Orleans as to the principal points of trade and settlement within a distance of a score or so of miles both up and down the river.

There is a most efficient ferry service between Quebec and Levis, especially when the rigor of the Canadian winter and the difficulties arising from ice in the river are taken into consideration. These difficulties necessitate the maintenance of two distinct fleets of steamers. For the summer service two covered pontoons are used, of 760 tons. The summer fleet of steam-

ers consists of the paddle wheel boats "North" and "South," of 349 and 329 tons respectively, and the screw steamer "Polaris," this latter, chiefly employed for the ferriage of G. T. R. freight. The "Polaris" is also fitted for winter navigation, and the remainder of the winter fleet is composed of the screw steamers "Pilot" and "Queen," of 426 and 436 tons respectively. In summer the boats cross every five minutes from each side of the river in the daytime, but less frequently at night. On an average the company employs 96 men daily, and during the past year its boats made 41,600 trips, traversing, in doing so, some 42,000 miles.

CHAPTER X.

QUEBEC'S FACILITIES FOR SAVING AND REPAIR- ING DAMAGED SHIPPING.

Mr. G. T. Davie's Docks, Shipyards, and Wreck-
Saving Apparatus.

The wreck-saving service available at Quebec in cases of casualties sustained by shipping in the river or Gulf is unsurpassed anywhere. Its establishment here is due entirely to private enterprise. To G. T. Davie, Esq., is due the credit of having provided the port of Quebec with the most perfect of known appliances for the saving and repairing of damaged shipping.

An enumeration of Mr. Davie's wreck-saving apparatus must necessarily commence with his new wrecking steamship the "Lord Stanley." This vessel, which is schooner rigged, would pass for a trim and saucy gunboat rather than a wrecking and towing vessel. She was built by Messrs. D. & W. Henderson, of Glasgow, in 1889, and the workmanship and material used in her construction do not detract from the name of that celebrated firm. The hull, of steel, is extra strongly built, the vessel classing 100, A1 at Lloyds, and is 280 tons. The following are her dimensions:—Length of keel, 140 feet; on deck, 150 feet; breadth of beam, 24 feet; depth of hold, 14 feet. She is supplied with two

water ballast tanks—that forward containing 45 tons; the after tank having a capacity of 50 tons. The engines, of the triple expansion pattern, are 160 horse power, and can drive the vessel (with her twin screws,) at the rate of 12 knots an hour. The boilers are tested to stand a steam pressure of 160 pounds to the square inch. The steamer is supplied with patent manual steering gear,—that is, the helm remains in any position in which it is placed by the wheelman until he chooses to change it. There are also two patent telegraphs from the bridge to the engine room, thus enabling the officer in charge to communicate with the engineer without crossing from one side of the ship to the other. The windlass and winches on board are worked by steam, avoiding a great deal of manual labor, besides facilitating work. Forward, between decks, is a large space for the accommodation of steam pumps and other apparatus required in floating stranded vessels, as well as space for 120 tons of coal, which latter is sufficient to enable the boat to run for about twenty days. Leaving the deck one descends into the after cabin, which is handsomely fitted up and furnished, affording room for sixteen persons, exclusive of two staterooms for ladies. Leaving the lower portion of the vessel and going along the main-deck amidships, on the starboard side, the captain's cosy stateroom is found, adjoining it being a number of lockers for the reception of the many articles required for the successful navigation of a steam vessel. On the opposite side is the officers' mess room, while close by is a most commodious galley, with all modern cooking utensils. Forward are the rooms of the chief mate and engineer, while a comfortable fore-castle, certified to accommodate eleven men, is provided for the crew.

The wheelhouse, which adjoins the bridge is very roomy and is provided with first class compasses and a complete set of signal flags. On the whole, the "Lord Stanley" is the most completely equipped wrecking vessel that has ever been in this port. She is fitted with search light and all latest improvements.

Then there is the schooner "G. T. D.," of 200 tons, classed A1 English Lloyds, and built expressly for wrecking purposes. It carries the following pumps :—

4 15 in. Gwynnes' Invincible Centrifugal.

1 10 in. " " "

1 8 in. " " "

1 6 in. " " "

2 Pulsometer Pumps.

1 Rotary.

1 Aqua Thruster Pump with boilers and outfit complete on board, and also a gang of wreckers experienced in the work of raising wrecked vessels.

The following are some of the steamers floated by Mr. Davie or repaired at his extensive works at St. Joseph de Lévis :—"Titania," "Lake Huron," "Polynesian," "Escalona," "Coban," "Deddington," "West Cumberland," "Grand Holme," "River Ettrick," "Bratsberg," "Norse King," "Coran" and "Canopus."

Some of the above mentioned steamers were repaired by Mr. Davie, in his own dock, and others in the Government Graving Dock, at St. Joseph de Lévis, while the steamships "Titania" and "Thornholme" were purchased by him as wrecks, raised by himself and brought up to port for repairs.

It would be difficult to conceive of anybody in his line of business more advantageously situated for the repairing of shipping than is Mr. Davie. His principal

workshops are immediately alongside the Government Graving Dock, while on the other side of the shops in question, at the very foot of his St. Joseph yard, he has just completed the construction of a beach dock, in which he recently placed the steamship "Thornholme." This is a wreck lately purchased by Mr. Davie, and now undergoing repairs. The "Thornholme" was towed around to St. Joseph, on the floating dock upon which she now rests, and it is expected that 150 men will be employed upon her during the greater part of the winter. She is a vessel of 1,816 tons, and is 260 feet in length. Mr. Davie's floating dock No. 1, upon which she now lies, is 236 feet long and 54 wide, and is capable of lifting steamers 290 feet long and of 2,175 tons.

Mr. Davie has another floating dock capable of raising 1,605 tons, and which is 180 feet long and 48 feet wide. Besides this, he has at his upper yard in Lévis, a patent slip 500 feet long, and capable of accommodating vessels up to 500 tons. It has already accommodated the "Lord Stanley," the "Otter," the "Con-test," and scores of others.

Reference has been made to Mr. Davie's lower shipyard at St. Joseph de Lévis. His workshops here which adjoin the Government Graving Dock property and his own beach dock, are 300 feet long, and furnished with the most improved and most modern machinery known to iron shipbuilders, the whole being in charge of his foreman for iron-work, Mr. Laverie, formerly of the Clyde.

It would be impossible even to mention the whole of the interesting features of this wonderful establishment. There is a combination plate and angle furnace

for heating the iron and steel plates that are to be bent or flanged to the shape of the ship's hull. It is capable of receiving the largest steamship's plates, and of melting steel in fifteen minutes. Then there are blocks for flanging plate, any required shape or angle. There are 100 tons of these blocks formed of metal, five and six inches thick. There is a roller capable of rolling 16 feet steel or iron plates of $1\frac{1}{4}$ inch thickness to any required shape, and countersinking machines, one, just imported, doing its work without requiring the moving of the plate. There are also horizontal punches for punching the bars of vessels' frames, after they have been set to the required curve, plate edge planing machinery for planing iron and steel plates up to 26 feet in length, bolt screwing machines, lathes and shaping machines and steam drills, one of which drills twelve holes of $1\frac{1}{4}$ inch diameter each, in an hour, through three inches of steel. It is now employed in drilling the holes for the rivets in the new keel to be placed at the bottom of the "Thornholme." There are also rivet making machinery, forge and steam hammers, side lever bulb and angle cutting saw, and a monster machine weighing 26 tons, known as a combined punch, shearing and angle cutting machine, which punches holes in or cuts through inch and a half steel as if it was so much butter. There are two very handsome engines, built by Messrs. Carrier, Lainé & Co., for driving all this machinery, the enormous steel boilers having been built in Mr. Davie's shops.

Extensive as these work-shops are they are by no means sufficiently so to contain anything like all of Mr. Davie's stock of material and tools for repairing iron steamships. There are other buildings containing

offices and stores. The former are elegantly furnished and the latter are stocked with a variety of utensils and material, including portable forges sufficient to run forty gangs of riveters, large supplies of rivets and tools of all kinds, 16 of Well's patent lamps of from 1,000 to 3,000 candles each, stocks of teak wood, of tool steel and silver steel for the making of fine edged tools, besides enormous quantities of materials for repairing ships, including Butterly's patent pulb beams, of which several were placed in the s.s. "Polynesian," large keel bars, and iron and steel angles of every size, suitable for the largest steamships visiting the St. Lawrence. Of iron and steel plates for repairing steamers, Mr. Davie has an immense supply, over 500 sheets in all, running from one-eighth of an inch to $1\frac{1}{4}$ inch in thickness, and up to 27 feet in length. It may thus be seen that Mr. Davie's shops are equally as well equipped for the repairing of iron steamships as those of any in the world. In fact he has frequently shipped plates and other materials required for such repairs elsewhere, to yards in Halifax and in St. John's, Newfoundland.

Mr. Davie's shops are all illuminated by electricity produced by his own dynamos.

CHAPTER XI.

QUEBEC'S FACILITIES FOR THE DOCKING OF DAMAGED SHIPPING.

The Government Graving Dock.

It has already been shown that in no part of the world are there to be found facilities for the repairing of damaged shipping superior in any way to those possessed by the port of Quebec. There are docks here of various kinds, both wet and dry, that can accommodate the largest steamships sailing to Canadian ports. There are Quebec firms, as shown in the preceding chapter, who have re-plated iron steamships in a manner that would do credit to the foremost ship-yards upon the Clyde; who have furnished their workshops with the most improved machinery known to the first naval architects of the world, and who have in their employ some of the skilled labor that has helped to make so famous the shipping mechanics of Glasgow.

Upon the Government Graving Dock alone, at St. Joseph de Lévis, nearly a million of dollars have been expended, while in the adjoining shops and stores of G. T. Davie, Esq., hundreds of thousands of dollars have been invested in machinery and stock for the repairing of iron steamships.

The wet docks at the mouth of the St. Charles, which

are capable of receiving at any one time several of the largest steamers afloat, have already been fully described in a former chapter. The principal dry dock in the port, and in fact in the whole of British North America is the

GOVERNMENT GRAVING DOCK.

This is situated at St. Joseph de Lévis, and has for the most part been cut out of solid rock. It was authorized by the Act 38 Vic., chap. 56, in the year 1875, but it was some time before the site could be agreed upon, both sides of the river being naturally anxious to secure the work. The actual site was finally chosen by an Order-in-Council, based on engineering reports, and adopted in May, 1877.

The contractors for the work were Messrs. Larkin, Connolly & Co., who also constructed the Esquimault graving dock in British Columbia, the dry dock at Kingston and the Cross and South walls of the Princess Louise docks, at the mouth of the St. Charles, as well as other works connected therewith. The whole construction was effected under the direction of the Quebec Harbor Commissioners, who brought the work to a successful completion in 1889, and continued to hold and manage the property for the Government up to the month of October, 1890, when it was taken possession of by the Department of Public Works, Ottawa, as provided for by law, and placed in charge of Mr. Valiquet, C. E., of that department, who succeeds the late dockmaster, Captain Bernier, resigned.

Messrs. Larkin, Connolly & Co. commenced work upon the dock on the 17th August, 1878, the original plans having been prepared by Messrs. Kinipple & Morris, of the Institute of Civil Engineers, England,

who were represented here by Mr. W. Pilkington, of their staff. Grave difficulties in connection with the nature of the ground, which seemed to have been misunderstood or miscalculated by the engineers, and was found to be partially of quicksand or something of that nature, delayed for some time the progress of the work, and seriously interfered with the efforts of the contractors in the preliminary stages of their submarine work. Their persevering persistence, scientific knowledge and practical experience, enabled them however to successfully combat all these difficulties, despite the pessimistic predictions of an army of croakers. In 1883, H. F. Perley, Esq., of Ottawa, chief engineer of the Public Works Department, assumed control of the work as its engineer, acting on behalf of the Quebec Harbor Commissioners, and under his direction it was successfully continued and brought to a most satisfactory conclusion. Up to the 10th December, 1889, the total expenditure upon its construction was \$910,000.

This dock is now one of the most perfect and most beautiful structures of the kind to be seen anywhere. It is 500 feet long, with a circular head of 31 feet radius, and a square offset of 19 feet on each side. Its entrance width is 62 feet, its width at the coping level 100 feet and at the bottom 73 feet. The depth of water on the sill at high water of ordinary neap tides is $20\frac{1}{2}$ feet, and at high water of ordinary spring tides, $25\frac{1}{2}$ feet.

The contractors for the caisson, etc., were Messrs. Wigham, Richardson & Co., and for the boilers and pumping machinery Messrs. Carrier, Lainé & Co., of Levis. The latter is exceedingly powerful, being competent to empty the dock of water in little more than three hours.

In order to protect against fire vessels using the dock, the first-class force pump in the engine house has been supplied with a thousand feet of hose. This valuable property is kept in the best condition and has given entire satisfaction to those who have had charge of the vessels which have employed it.

Already it has been used by some of the largest steamers sailing to this port, including the s.s. "Polynesian," of 3,983 tons, the s.s. "Canopus," the s.s. "Tintania," the s.s. "Lake Huron," the s.s. "Deddington," the Richelieu Company's steamer "Montreal," and many others. These monster vessels have all entered the dock without the slightest difficulty. When the newly arrived vessel is properly stayed, the water is pumped out in the short space of three hours, and the ship occupies the centre of a massive chamber of masonry, so admirably exact in construction and design that it is as dry as the interior of a house. Large numbers of Quebecers have here taken advantage of enjoying the remarkable experience of walking upon dry and solid masonry, twenty-five feet below the surface of the adjacent river, and under the keels of the modern leviathans of the deep.

In view of the proposal to subsidize a line of trans-Atlantic mail steamships, very much larger than any vessels now running to the St. Lawrence, it is, we understand, under serious contemplation, to extend the length of the dock. This will, however, be a comparatively inexpensive undertaking, as it will involve no submarine work, the extension being practicable by the cutting away of the rock at the upper end of the dock.

ADDITIONAL DOCKS.

We have now described the Government graving dock at St. Joseph de Levis and the docks of Mr. Geo. Davie.

Other docks in the port of Quebec are those of Mr. Jean Roche, at Wolfe's Cove, where steamers of large draught have been repaired, as well as sailing vessels. There is a floating dock of 212 feet long, capable of lifting 2,200 tons, a gridiron of 322 feet long, and a graving dock measuring 300 feet by 64 feet.

Mr. Alex. Russell, at Levis, has in connection with his ship-yards two floating dry docks and a gridiron. The latter is 200 feet long, and has a draught at the head of 14 feet, and at the stern of 17 feet. The floating docks are capable of raising 2,500 tons and 1,000 tons, respectively, and measure 225 feet and 160 feet in length.

CHAPTER XII.

QUEBEC'S FACILITIES FOR THE REPAIRING OF STEAMSHIPS.

The Workshops of Messrs. Carrier, Lainé & Co.

In a former chapter we have referred to the facilities possessed by Mr. Geo. Davie for saving and repairing wrecked steamships, and have shown that his workmanship in plating iron and steel vessels, differs in no respect from that obtainable on the Clyde.

Messrs. Carrier, Lainé & Co., of Levis, whose extensive workshops are alongside the river front, immediately opposite the city, have all the facilities for building or repairing ships' engines and boilers.

This firm has already built the engines for the powerful ferry steamer "Queen," for the steamer "La Minerve" plying on Lake Temiscamingue; for the quarantine steamer "Hygiea," the police boat "Dolphin," the ferry steamer "North," the "Progress," the "Thor," the "Margaret M," the "Champion," the "Northern Light," and many others. The foundation alone for the engines of the "Progress" weighed 32,000 lbs., and the cylinder, which was 12 feet by 5, weighed 23,300.

Only last winter, Messrs. Carrier, Lainé & Co. put a new cylinder in the steamer "Quebec," fixed the beam

and effected general repairs. They have also compounded several steamboat engines.

They have built steel boilers from 45 tons down for the steamers "St. Lawrence," "Margaret M," "Admiral Porter," "Queen," "Polaris," "Northern Light," &c., and the large boilers used by Mr. Geo. Davie for his steam pumps.

At present they are constructing the discharge pipes for the Kingston graving dock, each of which is of 22 inches diameter and weighs 3,676 lbs. In fact there is scarcely anything in extensive iron work that this firm cannot do. They make car wheels and build railway cars. They make general locomotive repairs and build iron bridges, having constructed several for the Intercolonial Railway. They supplied the girders for the Parliament House and the Court House, and manufacture spiral iron staircases, all machinery necessary for mills, and three different kinds of stationary engines. Very much of their own extensive and elaborate machinery for working in iron was manufactured in their own workshops, and they turn out machinery required in all branches of industry, having just constructed a machine for Mongenais & Boivin, of Montreal, for bevelling glass.

We might also speak of their large foundry and stove manufactory, but the object of the present chapter is rather to indicate the facilities that they possess for manufacturing or repairing the machinery of steamships.

The dimensions of their workshops are 600 by 230 feet and they are lighted throughout by electricity. They have the advantage of a siding of the Intercolonial Railway, the main line running right through

their yard. They own two wharves on the river front, on which are a ten ton steam winch, and two cranes, one 64 feet high and the other 45 feet. The tug "St. George" was some time ago lifted bodily out of the river by means of this machinery and placed on board the cars.

All the machinery in the workshops is run by a 50 horse power engine of Messrs. Carrier, Lainé & Co.'s own build, which has been in operation for the last thirteen years and never required any repairs.

In the boiler shops is to be found all the modern machinery necessary to boiler making and repairs, including steam hammers, hydraulic rivetters capable of rivetting 14 rivets a minute, shears and punches capable of cutting and punching respectively through $1\frac{1}{2}$ inches of steel. There is also a drill, the invention of Mr Lainé, capable of drilling 32 holes at the same time in car wheels.

In the engine and other shops there are also lathes of all sizes, planers for iron and steel, one very large one having been built in the shops, milling machines, slotting machines for making key-way cuts, bolt cutting and threading machinery, and much more that it is extremely difficult for the un-mechanical mind to comprehend. In fact there is nothing in the way of steamship and steamboat machinery that cannot be supplied or repaired at these extensive works, which are really a credit to the port and district of Quebec.

CHAPTER XIII.

THE PROTECTION OF SHIPPING AND SEAMEN BETWEEN QUEBEC AND THE SEA.

The Light-house and Telegraph Systems of the
Lower St. Lawrence and Gulf.

The light-house and telegraph systems of the Lower St. Lawrence and Gulf, intended for the protection of shipping and seamen between Quebec and the sea, are the admiration of all who observe them, and not a British or French Admiral has come to Quebec who has not expressed his surprise at their thoroughness and equipment. The light-house system is free for all nations without payment of dues of any kind. It is extensive, rapidly expanding and maintained in a high state of efficiency. Under the Hon. Peter Mitchell's incumbency of the Ministry of Marine and Fisheries, and Sir Hector Langevin's management of the Public Works Department, a great impetus was given to the extension of the lightage system of the Gulf, and the good work commenced by Mr. Mitchell has been continued by his several successors down to the present time. As illustrative of the rapidity of the extension of this important service, we cannot do better than quote from a lecture delivered some years ago before the Literary and Historical Society of Quebec, by the leading authority on this matter,—the gentlemanly official who is charged with the management and sur-

veillance of the whole system. Need we say that we have reference to J. U. Gregory, Esq., agent at Quebec for the Marine and Fisheries Department of Canada, and representative of the British Board of Trade. In the course of the lecture in question, Mr. Gregory said :—

“ Before Confederation we had in the Quebec District—as far as Belle Isle—18 light-houses, 1 light-ship, 5 fog cannons and 6 provision depots. At present the district is very much larger, it includes Montreal to Quebec, the Magdalen Islands and Bay des Chaleurs, and numbers 143 light-houses, 8 light-ships, 7 powerful steam fog whistles and horns, 9 fog guns, 8 provision depots—making it probably one of the best protected coasts in the world. The mariner, once he enters the Gulf, is but a few hours deprived of the guidance of these means to steer his course. Some of the light-houses have cost this young and ambitious country enormous sums of money. The establishment at Belle Isle cost over \$90,000; Forteau, \$90,000; Cape Rosier, \$75,000; S. W. Point Anticosti, \$34,000; and several others not far off the same price. The lantern alone at Belle Isle, a first order Dioptric, cost £4,000 stg., or nearly \$20,000. That at Cape Rosier as much. They are made of solid glass over three inches thick, cut into deep prisms, and are made only in two countries in the world; France and England. (Those I mention were made in Paris, France, by Messrs. Sautter, Lemmonnier & Co.) They are in blocks ten feet high, about three feet broad, and put together in solid brass frames, forming a round lantern, six feet in diameter. They are as clear as crystal, and made of the purest white glass. Many pieces being destroyed or laid aside from flaws before a perfect lantern can be put together; months are consumed in their manufacture. These lights are very powerful, and in keeping with any in the world, excepting the electric light only, and many navigators say they are seen as far off, and are very much less expensive. So long as a few lights were

called for, the country could stand such expense, but as our great shipping resources became developed, and wrecks more numerous, a demand was made for increased protection. Petroleum afforded a powerful medium for illuminating purposes, and a very much cheaper lighting apparatus was found reliable in the Catroptic Light, and easily managed; they are built in Canada, at Montreal, by Mr. E. Chanteloupe, whose exhibit at the last Paris Exhibition entitled him to first prizes and the decoration of the Legion of Honor. So much for home manufacture. And now our coast is dotted with fixed and revolving lights, both on its South and North Shores.

“Many of the most important of these lights, some as far off as the one on Belle Isle, have only cost from \$3,000 to \$10,000, and ten to fifteen light-houses are now put up at the cost of one formerly. Next in importance, and in fact in thick weather of the greatest importance, is the system of fog signals, on shore and on board of light-ships. These instruments are heard from three to ten miles off, according to state of the wind and atmosphere, and the confiding mariner, sure that he is in the right course, is often wakened to a sense of his danger by the blast of the fog horn, sound of the whistle, or boom of the cannon, when all haste is made to change the course, which was leading him on to destruction. Many a ship captain has related to me how he was saved by such timely warning, and expressed his gratitude for the fostering care of the Government in placing such admirable signals for his protection.

“Since the Manicouagan and Red Island light-ships have been placed on those dangerous shoals, with their powerful double lights at night, and penetrating steam whistles in thick weather, these dreaded localities, which had formerly doomed many a noble crew to a watery grave, and engulfed many a fine ship, have become almost entirely shorn of their records of disaster.

“To these means of protection for the mariner, has been added the International Code of Signals, in con-

nection with the system of telegraphing, for which we are indebted to the energy and perseverance of the Honorable Dr. Fortin, who received from the Minister of Public Works, the Honorable Mr. Langevin, his powerful support, and now the system, in many directions, is in perfect working order, and is an invaluable boon to the great shipping interest of Canada."

Of the total number of lights referred to by Mr. Gregory, there are in the gulf and in that portion of the river below Quebec, about a hundred fixed and revolving lights, ten light-ships, three of which have steam fog whistles, eight fog guns, eleven steam fog horns, 116 buoys, eight of which are gas buoys, fifty-nine beacons and nine life-saving canoes for service in the ice.

The fog whistles and horns blow a blast of eight to ten seconds' duration every minute or two. The fog guns are fired every half hour, with a charge of $2\frac{1}{2}$ to 3 pounds of powder, according to the weather.

All the lights, fog-alarms, etc., are regularly inspected once or twice a year and supplied with all necessities by the steamers of the Dominion Government,—the "Druid," the "Alert," which, temporarily at least, replaces the wrecked "Napoleon III," and occasionally by "La Canadienne."

These lights, etc., are for the most part situated in the Lower part of the St. Lawrence, and in the Gulf, the Baie des Chaleurs, the Straits of Belle Isle, on the Labrador and the west coast of Newfoundland. A great portion of these lights are telegraphic signal stations, the keepers being operators.

TELEGRAPHIC AND SIGNAL SERVICE.

A most complete system of Gulf telegraphy and signal service is in operation between Quebec and all im-

portant points of the north and south shore of the St. Lawrence. Telegraphic reports are received sometimes as often as twice a day from St. Pierre Miquelon, the Magdalen Islands, Anticosti, Gaspé, Coast of Gulf, Bird Rocks, Meat Cove, Cape Breton, Cape Ray, Newfoundland, and all intervening points. There are over thirty of these offices between Newfoundland and Quebec, from which reports touching the weather, the movements of the ice in the spring and autumn, the passage of steamers and other ships, either inwards or outwards, can be immediately reported to Quebec. This system is under the immediate control of Mr. H. J. McHugh, Superintendent of the Signal Service at Quebec.

SICK AND DISTRESSED MARINERS.

Distressed mariners at this port are cared for by the Marine Department, and often forwarded to their homes or other destination.

Sick seamen in port are sent to the Jeffery Hale or Hotel Dieu Hospitals, according as they profess the Protestant or Roman Catholic faith. Here they receive the best of attention and most humane treatment, the Government paying the Hospital authorities therefor, at the rate of 90 cents per day for each patient, which includes board and medical attendance. This plan is found to work most satisfactory to all concerned, while it has proved wonderfully economical to the Government. The price paid to the two Hospitals for the whole season will scarcely exceed \$1,000, while the maintenance of the Marine Hospital cost at least \$20,000 per annum.

CHAPTER XIV.

BRIEF REVIEW OF THE SITUATION.

MR. MERCIER'S GOOD ADVICE.

"Less Politics and More Business" Wanted.

A correspondent of the *Montreal Herald* has been interviewing Mr. Mercier, and Quebecers will read with much satisfaction his views of the future probable prosperity of our city.

"What are your ideas as to the future of the city of Quebec?"

"Quite sanguine. There has been a great change in Quebec since two years. The municipal administration has been very good during Mr. Langelier's time as Mayor. He has changed the appearance of the city as far as roads, sidewalks, and highways are concerned. We have now, as a rule, splendid roads and very fine sidewalks; streets have been widened and the Grande Allée has been paved and is now one of the most splendid highways that can be found. Electric lights have been put everywhere in the streets and a great number in private houses, and we may say without fear of contradiction that there is no city in America so well lighted as Quebec. Manufactories have been established and the number is now pretty large. The Quebec and Levis Electric Light Company, composed of our most prominent citizens, is using the great Montmorency Falls water-power, and other citizens,

friends of progress, have built at Montmorency Falls a very large cotton factory. We have here now very rich merchants doing a splendid business, and what is said of Quebec may be said also to a certain degree of the town of Levis, where the citizens seem disposed to wake up. We have on the two sides of the river seven lines of railway—on the south side, the Intercolonial Railway, the Grand Trunk's Montreal Railway, the Quebec Central Railway, and the Temiscouata Railway, the latter reaching Levis through the Intercolonial Railway. Three other railways are spoken of and may be built on the south shore during the next two years. On the north shore we have the Canadian Pacific, the Quebec and Lake St. John Railway, bringing here the farm products of that splendid country called the Lake St. John Valley, and the Quebec and Montmorency Railway running from here to St. Anne de Beaupré. A bridge for that railway has been built on the River St. Charles and is really a master-piece of work. The Lake St. John Railway Company is just about completing an embranchment, bringing its road directly into Quebec, instead of passing over the Canadian Pacific Railway line.

“An immense iron bridge has been built by my Government on the Chaudière River to replace the one destroyed nearly fifty years ago. The people of this old immense district between Lotbinière, Megantic and Levis had been since that time without a bridge to communicate together.

“To crown all this and give strong guarantees of my hopes being fulfilled, we have the great scheme of a bridge between Quebec and Levis, for which my Government has obtained from the Legislature at the last session a guarantee of one million dollars.

“For all these reasons I have very bright hopes for the prosperity of the city of Quebec, and these hopes will certainly be realized if the good citizens of this place are disposed to accept my advice and have less politics and more business.”

“Do you believe in the efforts made by the Quebec

merchants lately to re-establish the cattle shipment industry?"

"Yes I do; and I don't see why it would not be a success. We have here the best natural port in America, and we have a spot called Indian Cove, belonging to Messrs. Gilmour, which certainly ought to be used with advantage as a proper place to ship cattle—this Indian Cove being accessible to the largest steamers and to those seven railways I have spoken of. If the Montreal people had this Indian Cove and the Montmorency Falls at their disposal, millions and millions of business would be done yearly and I don't see why the Quebec people, intelligent as they are, would not see their way to use these great natural riches."

Mr. Mercier has evidently struck the right key. We want less politics and more business in Quebec as the Premier tells us, and as the CHRONICLE told its readers when the question of the Quebec bridge was before the Legislature a few months ago.

We want the Quebec bridge over the St. Lawrence and we must have it. We want it not only in the interests of the city and port, but in those of the entire Dominion, which cannot longer remain satisfied with the present break in the great all-Canadian through rail route from the Atlantic to the Pacific. But if it is also to be of any local service to Quebec, we must have it either immediately opposite the city or below it.

We want to see the reign of municipal improvements, so fittingly referred to by Mr. Mercier, extended, with of course a due regard to the financial situation. Our street improvements and our magnificent system of electric lighting are the admiration of every visitor to Quebec, and the progressive element in the City Council has still in perspective a number of other desirable improvements.

We want more of the spirit of enterprise that induced a number of our leading capitalists to embark in the electric light project and in the manufacture of boots and shoes, and of cotton for the China and Japan markets, and that led the Board of Trade and the Messrs. Kennedy to take the initiative in the shipping of cattle from this port to the European market.

We are pretty sure of having a rapid line of trans-Atlantic mail steamers running to this port, and we want to see an immediate and perfect understanding arrived at between our shipping merchants and the laboring classes, so that no reasorable excuse shall longer exist for the business that is rightfully Quebec's being taken to another port.

Above all, we are desirous that the entire mercantile world should be made acquainted with the magnificent facilities of the port of Quebec. To second the efforts of our Harbor Commissioners in this direction is the *raison d'être* of the series of articles which we now draw to a close, amply rewarded for their preparation and publication if they do but serve, by extending the knowledge of Quebec's superior accommodation for shipping, to hasten the time when our port shall become, what Nature intended it to be, the leading seaport of British North America and the easterly point of transhipment for the enormous commerce between Europe and Asia.

